

WHAT: Third Annual Buckeye Regional FIRST Robotics Competition

FIRST (**F**or **I**nspiration and **R**ecognition of **S**cience and **T**echnology), is a nonprofit organization dedicated to inspire an appreciation of science and technology in young people, their schools and their communities.

WHEN: March 25 – 27, 2004 --- Free and Open to the Public

WHERE: Cleveland State University Convocation Center

WHO: Over 1200 high schools students on 60 teams from five states—Ohio, Indiana, Michigan, New York, Pennsylvania, and West Virginia.

WHY: To participate in a most unusual competition of strategy and skill. With remote-controlled robots they designed and built, they will battle each other for first place and a myriad of other awards.

The winners of the Buckeye Regional will earn a place at the 2004 FIRST Championship Event held April 15-17 at The Georgia Dome in Atlanta, Georgia.

AGENDA: **March 25** – At 7:45 a.m. three members of each team uncrate their robots. At 8:30 a.m. doors open to spectators and remaining team members. Teams will be working on their robots in preparation for inspection and testing them out in practice rounds from 10 a.m. to 6 p.m..
March 26 – Doors open at 8 a.m. Opening ceremonies at 9 a.m. Seeding matches begin at 9:30 a.m to 5:15 p.m. Awards ceremony at 5:15 p.m. Team party at Rock and Roll Hall of Fame from 6:30 to 9 p.m. (No cameras at the Hall of Fame)
March 27 -- Doors open at 8 a.m. Opening ceremony at 9 a.m. Seeding matches until noon. Final rounds 1-3 p.m. Awards ceremony at 3 p.m.

ACTION: **On the Playing Field** - During each 2-minute match of the game “FIRST Frenzy: Raising the Bar,” two alliances--made up of two teams each—will guide their remote-controlled robots around the playing field attempting to deliver balls to their human players, who will shoot into fixed and moveable goals.
In the Pits - Teams furiously working on their robots between rounds to perfect them or repair them. Capture the anticipation, tension and frustration these young people are experiencing.
In the Stands - Team members, teachers, mentors, sponsors, parents and other family members cheering the teams on and shouting encouragement.
At the Team Party - Time for rest and relaxation at the Rock and Roll Hall of Fame (No cameras at the Hall of Fame)

COMPETITORS: **60 teams from six states:** Indiana, Michigan, New York, Ohio, Pennsylvania, West Virginia

Greater Cleveland Teams: Beachwood - Bedford - Berea - Cleveland Central Catholic - Cleveland Heights - Collinwood Computech - East Tech - Fairview Park - Charles F. Brush in Lyndhurst - Max S. Hayes Vocational - Midpark - North Royalton - Olmsted Falls - Rhodes - Shaw High School in East Cleveland - St. Edwards - St. Ignatius - Cleveland Municipal School District Team

Columbus Area Teams: East High School/Southeast Career Center - Eastmoor Academy - Marion-Franklin High School/Southeast Career Center - Whetstone High School/Southeast Career Center - Eastland Career Center in Groveport - Robotics Team of Central Ohio in Bexley

Cincinnati Area Teams: Lakota East High School in Liberty Township - Great Oaks Institute in Milford

Youngstown/Warren Area Teams: Girard High School and Chaney High School in Youngstown - Warren G. Harding High School in Warren

Other Ohio Teams: Alliance High School - Timken High School in Canton - Sinclair Community College SEMAA Program in Dayton

Indiana Teams: Walker Career Center and Pike High School Science and Engineering in Indianapolis - Southside High School in Fort Wayne - Leo High School

Michigan Teams: Pioneer High School in Ann Arbor - Cass Technical High School in Detroit - Forest Hills Northern and Northview High Schools in Grand Rapids - Grosse Pointe High Schools - West Ottawa High School in Holland - Huron Valley Schools in Milford - Toledo Public Schools in Ottawa Lake - Dondero and Kimball High Schools in Royal Oak - Romulus High School

New York Teams: Fairport High School - Liverpool High School - Newfane High School and Lockport High School in Lockport - John Marshall High School, Wilson High School, Churchville-Chili High School, Edison Technical and Occupational High School, and Global Media Arts High School in Rochester - Central Tech Vocational School in Syracuse - Webster High Schools

Pennsylvania Team: McDowell High School in Erie - Corry Area High School

West Virginia Teams: Mingo County Career Center in Delbarton - Morgantown High School - Parkersburg High School

FIRST and the Robotics Competition

ABOUT FIRST

FIRST (**F**or **I**nspiration and **R**ecognition of **S**cience and **T**echnology), is a nonprofit organization dedicated to inspire an appreciation of science and technology in young people, their schools and their communities.

Accomplished inventor Dean Kamen founded FIRST in 1989. Based in Manchester, New Hampshire, FIRST designs accessible, innovative programs to build self-confidence, knowledge and life skills while motivating young people to pursue opportunities in science, technology and engineering. With the support of many of the world's most well-known companies, the nonprofit organization hosts the FIRST Robotics Competition for high school students and the FIRST LEGO™ League for children 9-14 years old. To learn more about FIRST and the FIRST Robotics Competition go to www.usfirst.org.

FIRST is a volunteer-driven organization. Mentorship, event management, recruitment, etc. all happen through the efforts of committed and effective volunteers.

ABOUT THE COMPETITION

The FIRST Robotics Competition is a program that challenges high school students, working with professional mentors, to design and build a championship robot. The competition measures the effectiveness of each robot, the power of collaboration and the determination of students.

The program combines the excitement of sport with science and technology to create a unique sport for the mind. Competing helps high school students discover that the world of innovation and engineering can be rewarding and engaging, that the technological fields hold many opportunities, and that the basic concepts of science, math, engineering, and invention are exciting and interesting.

The FIRST Robotics Competition is an exciting competition that teams professionals and young people to solve an engineering design problem in an intense and competitive way. Engineers, working as mentors, experience again many of the reasons they chose engineering as a profession; and the companies they work for contribute to the community while they prepare and create their future workforce. Colleges, universities, corporations, businesses, and organizations provide scholarships to the participants.

The program is a life-changing, career-molding experience—and a lot of fun. The competitions are high-tech spectator sporting events, the result of lots of focused brainstorming, real-world teamwork, dedicated mentoring, project timelines, and deadlines.

In 2004 the competition will reach more than 20,000 students on over 900 teams in 26 regionals and the championship event. At the championship event at The Georgia Dome in Atlanta on April 15-17, teams from Canada, Brazil, Great Britain, and almost every U.S. state will be competing.

HOW IT WORKS

The FIRST Robotics Competition stages short games—2 minutes in length--played by remote-controlled robots piloted by students. The robots are designed and built in 6 weeks (out of a common set of basic parts) by a team of 15 to 25 high school students and a handful of engineer mentors.

Each school year, teams are formed in the fall. Regional competitions take place in March and April, and a championship event caps the season. Each regional involves 40 to 70 teams cheered on by thousands of fans over three days. Referees oversee the competition. Judges present awards to teams for design, technology, sportsmanship, commitment to FIRST and more.

WEBSITES

- To see an animation video of this year's game "FIRST Frenzy: Raising the Bar," go to <http://robotics.nasa.gov/archive/video.htm>
- To see the list of teams registered for the Buckeye Regional, go to http://www.usfirst.org/frc/map/FMPro?-db=team%20events.fp5&-lay=web&-format=team_list.htm&event=OH&event%20year=2004&status=signed%20up&-sortfield=team%20id&-max=all&-find

Team names that are underlined have Websites you can visit.

- To see images of the 2003 Buckeye Regional FIRST Robotics Competition, go to <http://www.grc.nasa.gov/WWW/OEP/first/regional/gallery/2003/index.htm>
- For further information about FIRST, go to <http://www.usfirst.org>
- For additional information about the Buckeye Regional, go to <http://www.firstbuckeye.org>
- For information about the NASA Robotics Education Project, go to <http://robotics.nasa.gov/about.htm>

Frequently Asked Questions about FIRST

What is FIRST?

FIRST (For Inspiration and Recognition of Science and Technology) was founded to inspire an appreciation of science and technology in young people. Based in Manchester, NH, the 501 (c) 3 non-profit organization designs accessible, innovative programs to build self-confidence, knowledge and life skills while motivating young people to pursue opportunities in science, technology and engineering.

FIRST provides two well-known programs, the FIRST Robotics Competition for high school students and FIRST LEGO™ League for children 9-14 years old. Also located at FIRST headquarters is the research and development facility called FIRST Place.

Is FIRST a non-profit organization?

FIRST is a 501 (c) 3 non-profit organization, supported by a wide variety of organizations, including corporate sponsors, educational institutions and professional organizations.

Who are some of the organizations that sponsor FIRST?

FIRST is supported by a strong network of national corporations, educational institutions, and professional institutions. Some of the world's most respected companies provide funding, mentorship time and talent, volunteerism, equipment and more to make FIRST a reality. Founding Sponsors include John Abele/Boston Scientific Corporation, Baxter International Inc., Daimler Chrysler Corporation Fund, Delphi, General Motors Corporation, Johnson & Johnson, Kleiner Perkins Caufield & Byers, Motorola, Inc., Xerox Corporation, and NASA. Official Sponsors Autodesk, Inc. and SMALL PARTS, Inc. provide sophisticated software grants and hard goods essential to robot design and function. Official Suppliers Microsoft and Federal Express support teams by supplying technology tools for team planning and communication, as well as critical shipping services.

What is the FIRST Robotics Competition?

The FIRST Robotics Competition is an annual event that challenges high school students - working with professional engineering and business mentors - to design and build a robot and compete in high-intensity events that measure the effectiveness of each robot, the power of team strategy and collaboration and the determination of students. Twelve years ago the FIRST Robotics Competition took place with 28 teams in a high school gym in New Hampshire. In 2004, FIRST Robotics largest ever competition will include 935 teams from Canada, Brazil, Mexico, the U.K. and nearly every state in the U.S. competing in 26 regional events and a Championship.

Why involve a professional engineer? Why don't students build the robot themselves?

FIRST creates powerful mentoring relationships between the students and professional engineers. FIRST Robotics teams include professional engineers from some of the world's most respected companies. Kids work closely with and learn from these "stars" of the engineering world. Meaningful involvement of adults in kid's lives is proven as an essential component for developing young people's potential.

How is the game played?

Each year's kick-off event unveils a new, exciting and challenging game. From the kick-off, teams have just six weeks to solve the season's common problem using the same kit of parts and a standard set of rules. The 2004 game, "FIRST Frenzy: Raising the Bar" calls for the students' robots to collect and pass 13" balls to the human player to then shoot them into fixed and moveable goals. There are 30" balls on the playing field that can then be placed on top of any goal by a robot, which will double the point value in the goal. Additionally, robots may attempt to hang from a 10-foot bar. All this in less than two minutes.

Who participates in the competition?

This year approximately 935 teams will compete in FIRST Robotics competitions in the 26 regional events and championship. Each team is comprised of professional mentors and an average of 25 students in grades 9-12. In addition, each FIRST team has one or more sponsors. Those sponsors include companies, universities or professional organizations that donate their time, talent, funds, equipment and much more to the team effort.

Is scientific, technology or mathematic expertise required for students to participate in the FIRST Robotics Competition?

FIRST invites students who may not be predisposed to science, math or technology to participate. In fact, the FIRST Robotics Competition is designed to inspire, motivate and encourage students to learn basic principles while challenging more experienced students. Since there are critical roles for students in everything from design and building, to computer animation, to fundraising and research, every student can actively participate and benefit.

What do the students win?

The most prestigious award that can be won is the Chairman's Award, which recognizes a team that has built significant and lasting partnerships through active mentoring by students, professional team members and sponsors. Awards are also given for design excellence, competitive play, sportsmanship and high-impact partnerships between schools, businesses and communities. A judging committee of distinguished professionals makes award decisions. All participating students receive a medallion in honor of their achievements.

Are there scholarship opportunities for students?

FIRST provides an education and career path for young people who might not otherwise have discovered an interest in and pursued careers in science, engineering and technology. FIRST students are eligible for over \$3.8 million in scholarship funds to continue education in science, technology and engineering.

Two thirds of FIRST student participants indicated an interest in working for a team sponsor in summer internships or full time employment.

Are there other benefits to participating?

Throughout their FIRST experience, students "win" as they gain maturity, build self-confidence and appreciation of teamwork, and an understanding of professionalism. Students have fun while building a network of friends and professional mentors who continue to enrich their lives.

Goodman Research Group, Boston, Mass., found positive results from their 2000 FIRST Robotics Competition evaluation. Their findings showed:

- Improvement in student attitudes about science, math, teamwork and the working world
- Improvement in students' self-image, particularly among under-represented groups
- FIRST students' attitudes about teamwork are significantly more positive after FIRST than they were before participating in the competition season
- Two-thirds of student participants indicated interest in working for one of their team sponsors after completing their education, and one fifth planned to work for one of their team sponsors in a summer internship or part-time job

Sponsors win by finding future employees and interns. Professional mentors are rewarded with renewed inspiration and a reminder as to why they chose engineering, science and technology as their careers. Volunteers are recognized as an integral and vital part of the way in which young people connect to the real world, in their own communities and in the world at large.

Who manages the teams and events?

FIRST is a volunteer-driven organization. Mentorship, event management, recruitment etc. all happen through the efforts of committed and effective volunteers.

How can volunteers and sponsors get involved?

The best way to start discovering the rewards of FIRST is to attend a regional competition (attendance is free), contact a mentor from a local team, visit the FIRST web site, or contact FIRST at 1-800-871-8326. Interested volunteers can also log on to <http://www.usfirst.org/robotics/mentoring> for more information about how to become a mentor.

What other opportunities does FIRST offer?

FIRST also introduces middle school students to the fun and experience of solving real world problems by applying math, science and technology. At the core of the program is the FIRST LEGO™ League – a robotics tournament that combines academic challenge with sport-like competition. The program is made possible by a partnership between FIRST and the LEGO™ Company, and through the contribution of companies, schools, parents and community members.

To learn more about FIRST and the 2004 Robotics Competition, go to www.usfirst.org.